RE: phthalate workgroup report

Stern, Jeff to: Kris Flint, John O'Loughlin, DeJesus, Kathryn (ECY), Preston, Seth (ECY), Tiffany, Bruce, Pete Rude, bmoo461 — 10/25/2007 10:23 AM

Cc: Kristine Koch, Deb Yamamoto, Sheila Eckman

Interesting that Di-n-butyl is more of a problem in Portland. Although we do find it in our in line samples with regularity, it is not often higher than BBP and we don't really see any sediment problems. In the entire LDW there were no SQS exceedances for Di.

FYI Draft RI for LDW

	Samples	SQS	CSL
DEHP	832	107	59
BBP	822	79	8
DEP	832	0	0
DMP	822	1	1
DNB	822	0	0
DNO	822	0	0

-----Original Message-----
From: Flint.Kris@epamail.epa.gov [mailto:Flint.Kris@epamail.epa.gov]
Sent: Thursday, October 25, 2007 9:07 AM
To: John O'Loughlin; DeJesus, Kathryn (ECY); Preston, Seth (ECY); Flint.Kris@epamail.epa.gov; Tiffany, Bruce; Stern, Jeff; Pete Rude; bmoo461@ecy.wa.gov
Cc: Koch.Kristine@epamail.epa.gov; Yamamoto.Deb@epamail.epa.gov; Eckman.Sheila@epamail.epa.gov
Subject: Fw: phthalate workgroup report

Alll: At the 10/22/07 Stormwater Conference in Portland, I gave a presentation that referenced the SPWG and provided a link to Ecology's web-page for more information. Karen Tarnow is with Oregon DEQ's water quality permits group and works on Portland Harbor source control. She was at the conference and apparently followed up on my recommendation to check our work out. Her inital questions are the 1st message at the end of this email chain. This message is a heads up that I resummarized our process a bit to answer her questions AND that I gave out y'all's names in case she has more specific questions.

Cheers!

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----- Forwarded by Kris Flint/R10/USEPA/US on 10/25/2007 09:01 AM -----

Kris Flint/R10/USEPA/US

To "TARNOW Karen E" <TARNOW.Karen@deq.state.or.us>

10/25/2007 09:00 AM

cc

Subject Re: phthalate workgroup report (Document link: Kris Flint)

WOW!! Somebody really did check out a reference from the last slide and I am impressed - I'm even happier to hear you liked the work! So your message raises a few different points.

First, I fear we have a issue with chemical nomenclature. DEHP is a synonym for BEP, BEHP. The workgroup went with the "DEHP" name because, as I understand it, we were able to collect more information using that synonym than with the locally common BEHP or BEP. Sorry for not making that a bit more clear in our notes & final product.

Next, we considered what other phthalates to look for in the data for and found that, in the total of available data (our work on "Occurrence"), DEHP and butyl benzyl (BBP) were the most commonly found and that di-n-butyl (along with di-n-octyl) were usually co-located with

either DEHP or BBP. So, by focussing on DEHP and BBP, we believe we also captured other phthalates' occurrence in sediments. That's the short story on how we focussed on the DEHP & BBP - to maximize the amount of information available for consideration.

Finally, with respect to those other pervasive, population-related pollutants (e.g., copper or PAHs from transportation), the sediment phthalate workgroup didn't research them specifically. In my opinion, what happened in this part of the process is that several lines of thought converged. While we were looking at atmospheric deposition in relation to the stormwater pathway to sediments, we also realized that regulations could better to control sources by controlling parts of the path to sediments. These thoughts really fit together well and, as we developed the pathway illustration, we further realized that other contaminants following the stormwater path to sediments were also not well regulated at any point along that path. The difference between phthalates and these other pollutants (e.g., copper, other PAHs) is that phthalates in sediments don't generate additional health/environmental risk because they're static and don't move up the food chain; whereas, these other pollutants do move up the food chain and pose additional health/environmental risk. So, the workgroup's statements are really broad and the recommendations suggest there is opportunity for lots of additional study to scope out fate/transport for these other pollutants.

In terms of understanding the sources and pathways for the other pervasive pollutants, I think the sediment phthalate workgroup had a definite goal and unique perspective that really influenced the process -- where and how we looked for data, how we processed it, and the conclusions we reached. Probably the most effective bit of work, in terms of bringing a completely different set of information to the table, was the source unit. As you may know, previous thinking about sediment phthalate sources concentrated largely on

in-field
source-tracing and material/product sampling. The
workgroup moved past
that approach - looking at chemical behavior with
some mass-balance
thinking about how much of the chemical is made or
imported to the US,
the many ways plasticized vinyl products are used,
and looking at
correlations with data from around the world (i.e.,
soil, air, water,
sediments & solids from China, Spain, France, UK,
US). To my
knowledge, no one or group has done similar work for
the other pervasive
sediment contaminants. Again, I think the key to our
new understanding
of sediment phthalates is the process we used which
was driven by a very
unique sediment perspective.

OK? If you have any other questions feel free to
call me or any of the
other technical workgroup members. FYI, John
O'Loughlin with Tacoma was
the lead for the occurrence and source units, Jeff
Stern with King
County was the lead for the risk & receptors unit,
and Pete Rude with
Seattle was the lead for the source control unit.
Bill Moore, Kathryn
DeJesus & I worked on the regulatory unit.

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cc
10/24/2007
09:46 AM
Subject
phthalate
workgroup report

Hi Kris -

I checked out the report this morning - great piece of work!
Unfortunately, the two predominant phthalates showing up in catch basin
and stormwater data in PH is BEHP and Di-n-butyl phthalates, which your
report doesn't address. The report indicated that other compounds pose
different health risks and have different fate and transport pathways.
Did your workgroup find any info that could help us better understand
the sources and pathways for these compounds? Or any other suggestions
about where to look? Thanks

Karen